

# TRANSI-TRAP<sup>TM</sup> SURGE PROTECTOR

MODEL TT3G50 (Stud Mount)  
MODEL TT3G50B (Bulkhead Mount)  
WEATHER PROOFED



## Specifications

Frequency: 0 to 3000 MHz

Insertion Loss:

<0.1 dB from 0 to 1000 MHz

<0.2 dB from 1000 to 2000 MHz

<0.5 dB from 2000 to 3000 MHz

VSWR:

<1.10: 1 from 0 to 1000 MHz

<1.30: 1 from 1000 to 2000 MHz

Characteristic Impedance: 50 ohms

DC Blocking: None. Will pass DC for Power and Control purposes. Max. DC or peak AC is 150 V.

Connectors: Female N-Type. Both Ends

Firing Point: 350 V. +/- 15% @ <100v/s

< 1000 @ 5kv/us rise

Breakdown Voltage: 20 to 30 V.

Surge Current: 5000 A (8/20 us pulse

ARC-PLUG Life: >600 Times @ 500A pulse (Field Replaceable)

Size: 1w x 1 1/4 h x .875 (2.4 oa) inches

25 w x 32 h x 22 (61 oa) mm

Mounting and

Grounding: Single Hole 1/4 -20 x 7/8 stud

Transi-Trap Surge Protectors are gas surge arresters designed to protect sensitive electronic equipment from damage due to excess voltage or currents generated by transient phenomena (lightning or static buildup).

The elements in the Arc-Plug<sup>TM</sup> Cartridge consist of two metal electrodes hermetically sealed in a rugged gas filled, ceramic cylinder. They perform as voltage-dependent switches which can reliably and repeatedly carry large currents for brief periods of time. In operation, a sufficient voltage across the element cause an arc to form between the electrodes, changing its impedance from greater than 10,000 meg-ohms to a few milli-ohms in less than 100 nanoseconds time. While conducting in the arc mode, the voltage across the surge arrester is less than 30 volts.

The life of the Arc-Plug<sup>TM</sup> Cartridge is a function of the surge current amplitude and duration to which the device is subjected. Transients are by their very nature unpredictable in magnitude and energy level. Life may be hundreds of operations, depending on surge current wave shape.

After a sufficient number of lightning pulses have been discharged through the Arc-Plug<sup>TM</sup> Cartridge, there is a gradual lowering of breakdown voltage and insulation resistance. Therefore, the Arc-Plug<sup>TM</sup> Cartridge replacement is indicated by an increase in VSWR during transmitter tune-up, or by a "dead" receiver caused by an extremely strong near-miss lightning discharge shorting the Arc-Plug<sup>TM</sup> Cartridge. In this case, the short continues to protect the equipment until cleared.

## Various Connector Styles Available

## Installation Instructions

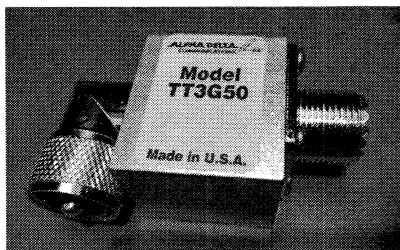
**WHERE TO INSTALL:** On a grounding buss or point where the equipment to be protected is grounded and as close to the equipment as practicable.

**HOW TO INSTALL:** Use the threaded stud on the back for a single hole mounting and grounding. Either connector may be used for input or output. Pre-existing cable must be cut and each end fitted with a male connector. Connect a cable to each end of the Transi-Trap and the installation is done. NOTE: To insure that the completed installation is weatherproof, it is imperative that the mating coaxial connectors be sealed using proper materials and procedures.

**REPLACEABLE ARC-PLUG CARTRIDGE:** After hundreds of protective firings of the Arc Cartridge or after a catastrophic surge, the Arc Cartridge may fail requiring replacement. Failure of the Arc Cartridge will be apparent due to the fact that it fails in a shorted or "fail-safe" mode so as not to leave the equipment unprotected. The TT3G50 surge protectors are designed allow the quick and simple replacement of the Arc Cartridge in the field without the use of tools and without removing the surge protector from the circuit. Simply unscrew the failed cartridge by gripping the knurled section and turning counter-clockwise. Replace with a new cartridge tightening only by hand until the cartridge "bottoms out" against the thru-line. Make sure that the cartridge O-ring is fully seated into the body of the protector. The TT3G50 is now restored to full operation.

Models ATT3G50M (N male/N female) and ATT3G50U/M90 (90 degree UHF male, UHF female) allow direct connection to equipment or ground panels, eliminating the need for jumpers or adapters.

Note: the M90 model can be rotated in any position before tightening the elbow connector shell.



M90 shown on left. TT3G50B N F/F BULKHEAD (3GHz) shown on right.

